

DOCKET NO. D-2000-033-2

DELAWARE RIVER BASIN COMMISSION

Special Protection Waters

Crayola, LLC

Groundwater Withdrawal and Discharge

Forks Township, Northampton County, Pennsylvania

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by Crayola, LLC (Crayola) on September 16, 2010 and amended on December 14, 2011, for renewal of an allocation of groundwater and review of a groundwater withdrawal and discharge project formerly approved by the DRBC on June 6, 2001 (Application).

The Application was reviewed for continued approval under Section 3.8 of the *Delaware River Basin Compact*. The Lehigh Valley Joint Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on March 7, 2012.

A. DESCRIPTION

1. Purpose. The purpose of this project is for the renewal of approval to continue to withdrawal 16.53 million gallons per month (mgm) of groundwater from Wells Nos. 1 and 4 and to re-inject non-contact cooling water into Well No. 2. The withdrawal supports irrigation and replenishment of an on-site landscape pond and industrial processes through non-contact geothermal cooling.

2. Location. The project is located in the Bushkill Creek Watershed in Forks Township, Northampton County, Pennsylvania within the drainage area of the section of the non-tidal Delaware River known as the Lower Delaware. The Lower Delaware is classified as Special Protection Waters. Bushkill Creek in the drainage area of the project is classified by the Pennsylvania Department of Environmental Protection (PADEP) as High Quality supporting Cold Water Fishes (HQ-CWF). The project wells are completed in the Epler and Jacksonburg Formations.

Specific location information has been withheld for security reasons.

3. Area Served. The project wells serve water to the Crayola manufacturing facility only. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. Physical features.

a. Design criteria. Groundwater withdrawals from Well No. 4 are used for non-contact geothermal cooling. Non-contact cooling water is returned to the aquifer using Well No. 2. Well No. 1 was used for withdrawals for non-contact cooling water, but was replaced by Well No. 4 in 1989. Well No. 1 currently serves as a back-up well for non-contact cooling water and as a source of water for landscape irrigation and replenishment of the on-site landscape pond. Crayola's existing average and maximum water demand is 0.464 mgd (14.38 mgm) and 0.513 mgd, respectively. Of the existing average water use, approximately 99 percent is used for industrial non-contact geothermal cooling water and 1 percent is used for irrigation of the facility grounds and maintaining the on-site landscape pond level.

b. Facilities. The existing project wells have the following characteristics:

WELL NO.	DEPTH	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY	YEAR DRILLED
1 (withdrawal)	300'	160'/'	350	1976
2 (injection)	227'	89'/'	N/A	1976
4 (withdrawal)	186'	140'/'	350	1989

All wells are metered.

The project wellheads are above the 100-year flood elevation.

Withdrawn water is not treated prior to entering the facilities. Non-contact geothermal cooling water is not treated prior to re-injection and is returned to the aquifer undiminished in quality.

Sanitary and process water for the office building and manufacturing facility is supplied by the City of Easton's water distribution system approved by DRBC Docket No. D-1999-062 CP-1 on February 28, 2007.

c. Other. Non-contact industrial cooling water supplied by Wells Nos. 1 and 4, is returned to the groundwater via injection Well No. 2, with no significant changes to quantity or quality. Domestic and process wastewater is conveyed to the Easton Area Joint Sewer Authority's sewage treatment facility most recently approved by DRBC Docket No. D-1987-10 CP on May 27, 1987. The PADEP issued its most recent NPDES Permit No. PA0027235 on May 1, 2007 for this treatment facility. The treatment facility has adequate capacity to receive wastewater from the proposed project.

d. **Cost.** This is an existing project with no modifications. There are no significant costs associated with the renewal of this approval.

B. **FINDINGS**

Special Protection Waters

In 1992, the DRBC adopted Special Protection Waters requirements, as part of the DRBC *Water Quality Regulations* (WQR), designed to protect existing high water quality in applicable areas of the Delaware River Basin. One hundred twenty miles of the Delaware River from Hancock, New York downstream to the Delaware Water Gap were classified by the DRBC as SPW. This stretch includes the sections of the river federally designated as "Wild and Scenic" in 1978 -- the Upper Delaware Scenic and Recreational River and the Delaware Water Gap National Recreation Area -- as well as an eight-mile reach between Milrift and Milford, Pennsylvania which is not federally designated. The SPW regulations apply to this 120-mile stretch of the river and its drainage area.

On July 16, 2008, the DRBC approved amendments to its *Water Quality Regulations* that provide increased protection for waters that the Commission classifies as Special Protection Waters. The portion of the Delaware River and its tributaries within the boundary of the Lower Delaware River Management Plan Area was approved for Special Protection Waters designation and clarity on definitions and terms were updated for the entire program.

Article 3.10.3A.2.e.1). and 2). of the *Water Quality Regulations, Administrative Manual - Part III*, states that projects subject to review under Section 3.8 of the Compact that are located in the drainage area of Special Protection Waters must submit for approval a Non-Point Source Pollution Control Plan that controls the new or increased non-point source loads generated within the portion of the docket holder's service area which is also located within the drainage area of Special Protection Waters. The wells providing water supply to the docket holder are located within the drainage area to the Special Protection Waters. Since this project does not entail additional construction and expansion of facilities/service areas and there are not any new or increased non-point source loads associated with this approval, the non-point source pollution control plan requirement is not applicable at this time. Accordingly, Special Condition II.(z.) has been included in the Decision section of this docket.

Geothermal Cooling

This project consists of an existing withdrawal and re-injection of groundwater for the purpose of non-contact geothermal cooling. While the geothermal system is non-contact cooling water, the system is "open-loop" in that; water used for cooling is withdrawn from one well (Well No. 4) and discharged to another (Well No. 2).

The United States Environmental Protection Agency (US EPA) classifies this type of well as a Class V Underground Injection Well. The project was permitted by the US EPA Region III in Underground Injection Control (UIC) Permit No. PAS5A191BNOR issued on March 1, 1991. This permit expired March 1, 2001; however, under the EPA UIC Regulations, all Class V injection wells, with the exception of large capacity cesspools and motor vehicle waste disposal

wells that are specifically addressed by the Class V Rule, are “authorized by rule” (40 CFR 144.24). This means they are allowed to inject if they comply with the UIC program requirements. The most important of these requirements is that Class V wells are not allowed to endanger drinking water aquifers. Non-endangerment means that injection operations must not allow fluid containing any contaminants to move into USDWs where the presence of the contaminants may cause violations of primary drinking water regulations or adversely affect public health (40 CFR 144.12). These program requirements include: 1) submitting basic information about Class V injection wells to EPA or the state primacy agency, and 2) constructing, operating, and closing Class V injection wells in a manner which protects underground sources of drinking water. EPA or a state primacy agency may ask for additional information or require a permit in order to ensure that ground water quality is adequately protected.

As a condition of Crayola’s authorization by rule, the docket holder performs annual analytical testing of the groundwater aquifer to which return water is injected, keeps daily withdrawal and injection records, performs monthly inspections of the facility, and reports withdrawals and discharges annually.

The docket holder has requested allocations for existing Well Nos. 1 and 4 based on existing water use and previously approved DRBC water allocations. These rates are provided in Decision Condition II.d. in the Decision Section of this docket. Non-contact geothermal cooling water is not treated prior to re-injection and is returned to the aquifer undiminished in quality. There should be no significant impacts from continued withdrawals from and re-injection to the existing wells.

The project is designed to conform to the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

Other

This project was previously approved by the Commission on June 6, 2001 by Docket No. D-2000-033-1. Binney & Smith, Inc. was the docket holder. On January 1, 2007, Binney & Smith, maker of Crayola® Crayons formally changed their name to Crayola, LLC.

The docket holder estimates that the project withdrawals, used for the purpose of non-contact geothermal cooling, result in a consumptive use of less than 1% percent of the total water used for non-contact geothermal cooling. The DRBC estimates that the project withdrawals, used for the purpose of irrigation and pond replenishment result in a consumptive use of 90% percent of the total water used for irrigation and pond replenishment. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

C. DECISION

I. Effective on the approval date for Docket No. D-2000-033-2, Docket No. D-2000-033-1 is terminated and replaced by Docket No. D-2000-033-2.

II. The project and appurtenant facilities as described in the Section A “Physical features” are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the EPA in its UIC Regulations, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s.

b. The docket holder shall register with and report to the PADEP all surface and ground water sources described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).

c. The wells and operational records shall be available at all times for inspection by the DRBC.

d. The wells shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

e. During any month, the combined withdrawal from all well sources shall not exceed 16.53 million gallons. No well shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL NO.	MAXIMUM INSTANTANEOUS RATE	MONTHLY ALLOCATION
1 (withdrawal)	350 gpm	15.624 mgm
2 (injection)	---	---
4 (withdrawal)	350 gpm	15.624 mgm

f. The wells shall be equipped with readily accessible capped ports and minimum ½ inch inner diameter (ID) drop pipes so that water levels may be measured under all conditions. Existing wells are to be similarly equipped, where possible, with readily accessible ports and ½ inch ID drop pipes as repairs or modifications are made at each existing well.

g. The project withdrawals shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the PADEP annually and shall be available at any time to the Commission if requested by the Executive Director.

h. The docket holder shall implement to the satisfaction of the PADEP, the continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to the PADEP on the actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

i. No water service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

j. The docket holder shall continue to implement its Water Conservation Plan as approved by PADEP, and shall report to the PADEP on actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

k. The docket holder shall implement to the satisfaction of the PADEP, a drought or other water supply emergency plan.

l. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams from any new facilities or repair related construction.

m. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

n. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this docket. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

o. A complete application for the renewal of this docket, or a notice of intent to cease the operations (withdrawal, discharge, etc.) approved by this docket by the expiration date, must be submitted to the DRBC at least 12 months prior to the expiration date below (unless permission has been granted by the DRBC for submission at a later date), using the appropriate DRBC application form. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below, the terms and conditions of this docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

p. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

q. If the monitoring required herein, or any other data or information demonstrates that the operation of this project significantly affects or interferes with any domestic or other existing uses of ground or surface water, or if the docket holder receives a

complaint by any existing ground or surface water users within the zone of influence of the withdrawal, the docket holder shall immediately notify the Executive Director of any complaints by any ground or surface users within the zone of influence of the withdrawal, and unless excused by the Executive Director, shall investigate such complaints. The docket holder should direct phone call notifications of potential well or surface water interference or complaints of interference to the DRBC Project Review Section at 609-883-9500, extension 216. Oral notification must always be followed up in writing directed to the Executive Director. In addition, the docket holder shall provide written notification to all potentially impacted users of wells or surface water supplies of the docket holder's responsibilities under this condition. Any ground or surface water user which is substantially adversely affected, rendered dry or otherwise diminished as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder. A report of investigation and/or mitigation plan prepared by a hydrologist shall be submitted to the Executive Director as soon as practicable. The Executive Director shall make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required.

r. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

s. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

t. Prior to allowing connections from any new service areas or any new developments, the docket holder shall either submit and have approved by the Executive Director of the DRBC a Non-Point Source Pollution Control Plan (NPSPCP) in accordance with Section 3.10.3.A.2.e, or receive written confirmation from the Executive Director of the DRBC that the new service area is in compliance with a DRBC approved NPSPCP.

u. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure*. In accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

BY THE COMMISSION

APPROVAL DATE: March 7, 2012

EXPIRATION DATE: March 7, 2022